METHOD AND APPARATUS FOR REDUCING RISK THAT A THROWN TOY WILL INJURE AN ANIMAL

[0001] This application is a continuation of pending application Ser. No. 11/123,573, filed May 6, 2005, which is a continuation-in-part of pending application Ser. No. 11/093,629 filed Mar. 30, 2005, which is a continuation-in-part of pending U.S. patent application Ser. No. 10/854,548, filed May 26, 2004. This application is also a continuation-in-part of pending application Ser. No. 09/526,777, filed Mar. 16, 2000.

[0002] This invention relates to toys.

[0003] More particularly, the invention relates to a toy for an animal.

[0004] In a further respect, the invention relates to an animal toy which when thrown can bounce erratically, which minimizes the probability of harm to an animal trying to catch a toy which has been thrown, which is symmetrical but is shaped to include points at varying distances away from the center of the toy to enable the toy to bounce erratically, which is permanently sealed so that the toy repeatedly compressively elastically deforms and bends in the same predictable manner, which includes a soft fabric outer surface that compresses to absorb blows and soften the impact when the toy hits an animal or other surface, and which can withstand being bitten or chewed by a dog and continue to function.

[0005] A wide variety of animal toys are known. One kind of toy is made of hard rubber and comes in a variety of shapes. For example, a dog bone made of hard, tough rubber has long been sold in retail outlets. A hard, tough rubber is utilized to make it difficult for a dog to chew through the bone. The rubber also adds weight to the toy, permitting the toy to be thrown long distances. Finally, the rubber material used to make the toy also enables the toy bone to bounce into the air. Dogs like chasing bouncing toys. While this type of toy is without question resistant to be damaged or chewed up, the toy is also dangerous. If the toy when thrown bounces into a dog, the toy can, due to its hardness, injure the animal. Worse, if the bone is thrown in the air and hits the dog straight away before the bone hits the ground, the dog can also be injured.

[0006] Animal toys can be constructed by attaching sections of felt fabric to the outer surface of a rubber shell such that the fabric sections are separated by a seam or strip of rubber or other polymer. In practice, the fabric sections are adhered or otherwise fastened to the rubber shell such that the edge of one piece of fabric is adjacent the edge of a second piece of fabric. The adjacent fabric edges define a rough seam line. A strip of rubber tape is attached to the pieces of fabric such that the tape covers the seam line. After the tape is attached, the entire rubber shell—fabric piece—rubber tape assembly is placed in a mold to melt and cure the rubber tape. A particular problem associated with this procedure is that the edges of the top and bottom portions of the mold tend to engage and stick to the rubber tape, pulling a large portion of the tape off the seam line.

[0007] One type of retrieval training toy comprises a piece of rope or cord attached to a plastic body or to a body comprises of a small canvas bag filled with a pliable material like sawdust, sand, small pieces of paper, etc. A trainer or other individual utilizes a retrieval toy by grasping the piece of rope and using the rope to throw the toy. The dog or other animal retrieving the toy takes the rope or body and carries the toy back to the trainer. These kinds of retrieval training toys ordinarily are not sealed or do not bounce Accordingly, it would be highly desirable to provide an improved dog's toy which can be thrown a long distance to bounce in an erratic pattern liked by dogs while producing only a small risk that the toy will injure a dog. It would also be highly desirable to provide an improved method for molding a dog's toy to minimize the quantity of rubber tape pulled off the seam line of the toy during molding of the toy to soften and cure the rubber tape.

[0008] Therefore, it is a principal object of the instant invention to provide an improved toy.

[0009] A further object of the invention is to provide an improved animal toy which reduces the risk that the toy will, when thrown, injure an animal chasing the toy.

[0010] Another object of the invention is to provide an improved animal toy which elastically compresses and bends to minimize the risk of injury to an animal.

[0011] Still another object of the invention is to provide an improved method of producing an animal toy which reduces the likelihood that polymer seam tape will significantly damaged during molding.

[0012] Still a further object of the invention is to provide an improved retrieval toy which includes a throw-rope attached to a toy body, which is sealed, and which bounces.

[0013] Yet another object of the invention is to provide an improved method for manufacturing a pliable retrieval toy of the type including a throw-rope attached to a toy body.

[0014] These and other, further and more specific objects and advantages of the invention will be apparent to those skilled in the art from the following detailed description thereof, taken in conjunction with the drawings, in which:

[0015] FIG. **1** is a perspective view of a hollow elastic fabric-covered toy constructed in accordance with the principles of the invention;

[0016] FIG. **2** is a perspective view of another hollow elastic fabric-covered toy constructed in accordance with the principles of the invention;

[0017] FIG. **3** is a perspective view of still another hollow, elastic fabric-covered toy constructed in accordance with the principles of the invention;

[0018] FIG. **4** is a side elevation view of the toy of FIG. **1** bouncing end-over-end in a constant fixed direction after being thrown and landing on the ground;

[0019] FIG. **5** is a block flow diagram illustrating a method for producing an animal toy in accordance with the invention;

[0020] FIG. **6** is a top view of the top and bottom halves used in forming a toy in accordance with the method of FIG. **5**;

[0021] FIG. **7** is a side elevation assembly view of the top and bottom halves of FIG. **6** further indicating where adhesive is applied to affix the top and bottom halves to one another to form a seam line;